

CLAIMS

What is claimed is:

1. A method for validating a rear steering angle of a vehicle,
comprising:
receiving a plurality of signals indicative of said rear steering angle;
checking at least one of said plurality of signals to determine if it falls
5 within a valid range;
correlating at least a first signal of said plurality of signals with at least a
second signal of said plurality of signals to determine if either said first
signal or said second signal is invalid; and
signaling a rejection of any of said plurality of signals found to be
10 invalid.
2. A method as defined in Claim 1, said correlating
comprising:
comparing said first signal with an expected value at about an inflection
point of said second signal.
3. A method as defined in Claim 2, said correlating further
comprising:
adding a second rear-wheel angle offset corresponding to said
inflection point to a signal corresponding to said second signal in response to
5 said comparing.
4. A method as defined in Claim 3, said correlating further
comprising:
subtracting a center value from said second signal; and
multiplying a result of said subtracting by a scale factor.
5. A method as defined in Claim 3, further comprising:
computing said expected value with reference to a look-up table.

6. A method as defined in Claim 3, further comprising:
computing said expected value by evaluating a continuous
function.

7. A method as defined in Claim 1, said correlating
comprising:

calculating a steering angle corresponding to one of said first
signal and said second signal so as to create a calculated angle; and

5 computing an expected value of the other of said first signal and
said second signal in accordance with said calculated angle.

8. A method as defined in Claim 7, said correlating further
comprising:

comparing said expected value of said other of said first signal
and said second signal with an actual value of said other of said first signal and
5 said second signal.

9. A method as defined in Claim 8, said correlating further
comprising:

determining that any of said plurality of signals is invalid if said
expected value and said actual value are not substantially equivalent.

10. A method as defined in Claim 7, wherein at least one of
said calculating and said computing further comprises using a look-up table.

11. A method as defined in Claim 7, wherein at least one of
said calculating and said computing further comprises evaluating a continuous
function.

12. A method as defined in Claim 1, wherein said plurality of
signals comprises a plurality of signal components of a single carrier signal.

13. A method as defined in Claim 1, wherein said receiving
further comprises providing a single sensor having two signal outputs.

14. A method as defined in Claim 1, wherein said checking further comprises:

comparing at least one of said plurality of signals with an upper limit; and

5 comparing at least one of said plurality of signals with a lower limit.

15. A storage medium encoded with a machine readable computer program code comprising:

computer code for receiving a plurality of signals indicative of a rear steering angle;

5 computer code for checking at least one of said plurality of signals to determine if it falls outside a valid range and is invalid;

computer code for correlating at least a first signal of said plurality of signals with at least a second signal of said plurality of signals to determine if either said first signal or said second signal is invalid; and

10 computer code for signaling a rejection of any of said plurality of signals found to be invalid.

16. A computer data signal comprising:

computer code for receiving a plurality of signals indicative of a rear steering angle;

5 computer code for checking at least one of said plurality of signals to determine if it falls outside a valid range and is invalid;

computer code for correlating at least a first signal of said plurality of signals with at least a second signal of said plurality of signals to determine if either said first signal or said second signal is invalid; and

10 computer code for signaling a rejection of any of said plurality of signals found to be invalid.

17. A rear steering system for a vehicle, comprising:
 at least one actuator in operable communication with a pair of
 rear wheels; and
 a controller operably interconnected with said actuator; a
 5 means for receiving a plurality of signals indicative of a rear
 steering angle of said rear wheels;
 means for checking at least one of said plurality of signals to
 determine if it falls outside a valid range and is invalid;
 means for correlating at least a first signal of said plurality of
 10 signals with at least a second signal of said plurality of signals to determine if
 either said first signal or said second signal is invalid; and
 means for signaling a rejection of any of said plurality of signals
 found to be invalid.
18. A controller for a rear-wheel steering system, the
 controller comprising:
 means for receiving a plurality of signals indicative of a rear
 steering angle;
 5 means for checking at least one of said plurality of signals to
 determine if it falls outside a valid range and is invalid;
 means for correlating at least a first signal of said plurality of
 signals with at least a second signal of said plurality of signals to determine if
 either said first signal or said second signal is invalid; and
 10 means for signaling a rejection of any of said plurality of signals
 found to be invalid.

19. A controller for a rear-wheel steering system, the controller comprising:

at least one input terminal for receiving a plurality of signals indicative of a rear steering angle;

5 at least one comparator for checking at least one of said plurality of signals to determine if it falls outside a valid range and is invalid;

at least one correlation function for correlating at least a first signal of said plurality of signals with at least a second signal of said plurality of signals to determine if either said first signal or said second signal is invalid;

10 and

at least one output terminal for signaling a rejection of any of said plurality of signals found to be invalid.

20. A method for determining a steering angle comprising:

receiving a plurality of signals indicative of said steering angle;

checking at least one of said plurality of signals to determine if it falls within a valid range;

5 correlating at least a first signal of said plurality of signals with at least a second signal of said plurality of signals to determine that neither said first signal or said second signal is invalid;

determining a first value of said steering angle in accordance with said first signal; and

10 determining a second value of said steering angle in accordance with said first value of said steering angle and said second signal in order to obtain a more accurate measurement.